P4SDP BIOS Setup

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BIOS Setup

Introduction

This manual discussed Award™ Setup program built into the ROM BIOS. The Setup program allows users to modify the basic system configuration. This special information is then stored in battery-backed RAM so that it retains the Setup information when the power is turned off.

The Award BIOS™ installed in your computer system's ROM (Read Only Memory) is a custom version of an industry standard BIOS. This means that it supports Intel Pentium ® 4 processor input/output system. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

Adding important has customized the Award BIOS™, but nonstandard, features such as virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

The rest of this manual is intended to guide you through the process of configuring your system using Setup.

Plug and Play Support

These AWARD BIOS supports the Plug and Play Version 1.0A specification. ESCD (Extended System Configuration Data) write is supported.

EPA Green PC Support

This AWARD BIOS supports Version 1.03 of the EPA Green PC specification.

APM Support

These AWARD BIOS supports Version 1.1&1.2 of the Advanced Power Management (APM) specification. Power management features are implemented via the System Management Interrupt (SMI). Sleep and Suspend power management modes are supported. Power to the hard disk drives and video monitors can be managed by this AWARD BIOS.

PCI Bus Support

This AWARD BIOS also supports Version 2.1 of the Intel PCI (Peripheral Component Interconnect) local bus specification.

DRAM Support

DDR SDRAM (Double Data Rate Synchronous DRAM) are supported.

Supported CPUs

This AWARD BIOS supports the Intel Pentium ® 4 CPU.

Using Setup

In general, you use the arrow keys to highlight items, press <Enter> to select, use the <PgUp> and <PgDn> keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate in the Setup program by using the keyboard.

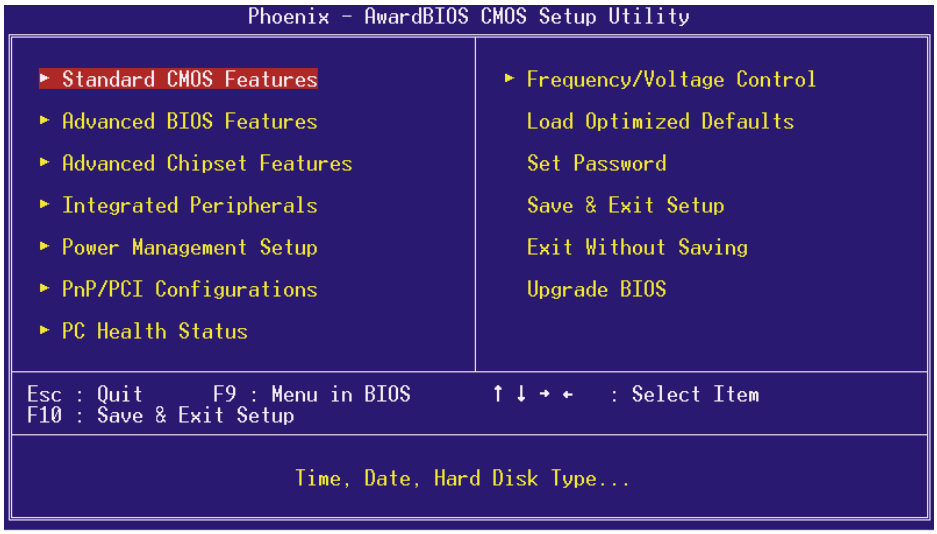
Keystroke	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left (menu bar)
Right arrow	Move to the item on the right (menu bar)
Move Enter	Move to the item you desired
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
+ Key	Increase the numeric value or make changes
- Key	Decrease the numeric value or make changes
Esc key	Main Menu – Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu – Exit Current page and return to Main Menu
F1 key	General help on Setup navigation keys
F5 key	Load previous values from CMOS
F6 key	Load the fail-safe defaults from BIOS default table
F7 key	Load the optimized defaults
F10 key	Save all the CMOS changes and exit

1 Main Menu

Once you enter Award BIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

> ***!! WARNING !!***
>
> The information about BIOS defaults on manual (**Figure 1,2,3,4,5,6,7,8,9**) is just for reference, please refer to the BIOS installed on board, for update information.

■ **Figure 1. Main Menu**



Standard CMOS Features

This submenu contains industry standard configurable options.

Advanced BIOS Features

This submenu allows you to configure enhanced features of the BIOS.

Advanced Chipset Features

This submenu allows you to configure special chipset features.

Integrated Peripherals

This submenu allows you to configure certain IDE hard drive options and Programmed Input/ Output features.

Power Management Setup

This submenu allows you to configure the power management features.

PnP/PCI Configurations

This submenu allows you to configure certain "Plug and Play" and PCI options.

PC Health Status

This submenu allows you to monitor the hardware of your system.

Frequency/ Voltage Control

This submenu allows you to change CPU Vcore Voltage and CPU/PCI clock. **(However, this function is strongly recommended not to use. Not properly change the voltage and clock may cause CPU or M/B damage!)**

Load Optimized Defaults

This selection allows you to reload the BIOS when the system is having problems particularly with the boot sequence. These configurations are factory settings optimized for this system. A confirmation message will be displayed before defaults are set.

Set Password

Setting the password will prohibit everyone except the supervisor from making changes using the CMOS Setup Utility. You will be prompted with to enter a password.

Save & Exit Setup

Save all configuration changes to CMOS(memory) and exit setup. Confirmation message will be displayed before proceeding.

Exit Without Saving

Abandon all changes made during the current session and exit setup. confirmation message will be displayed before proceeding.

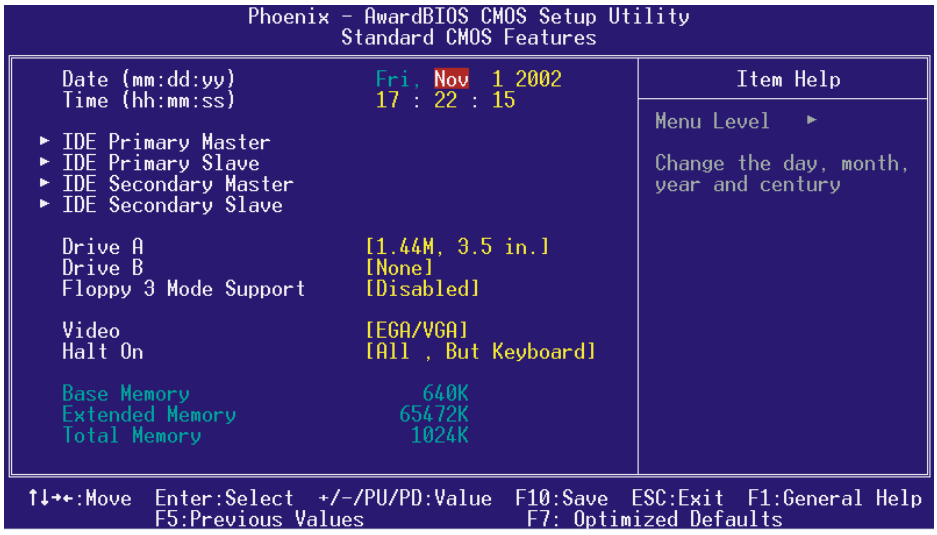
Upgrade BIOS

This submenu allows you to upgrade bios.

2 Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the<PgUp> or <PgDn> keys to select the value you want in each item.

■ **Figure 2. Standard CMOS Setup**


Phoenix - AwardBIOS CMOS Setup Utility
Standard CMOS Features
Date (mm:dd:yy) Fri, Nov 1 2002
Time (hh:mm:ss) 17 : 22 : 15
IDE Primary Master
IDE Primary Slave
IDE Secondary Master
IDE Secondary Slave
Drive A [1.44M, 3.5 in.]
Drive B [None]
Floppy 3 Mode Support [Disabled]
Video [EGA/VGA]
Halt On [All , But Keyboard]
Base Memory 640K
Extended Memory 65472K
Total Memory 1024K
Item Help
Menu Level ►
Change the day, month, year and century
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7: Optimized Defaults

Main Menu Selections

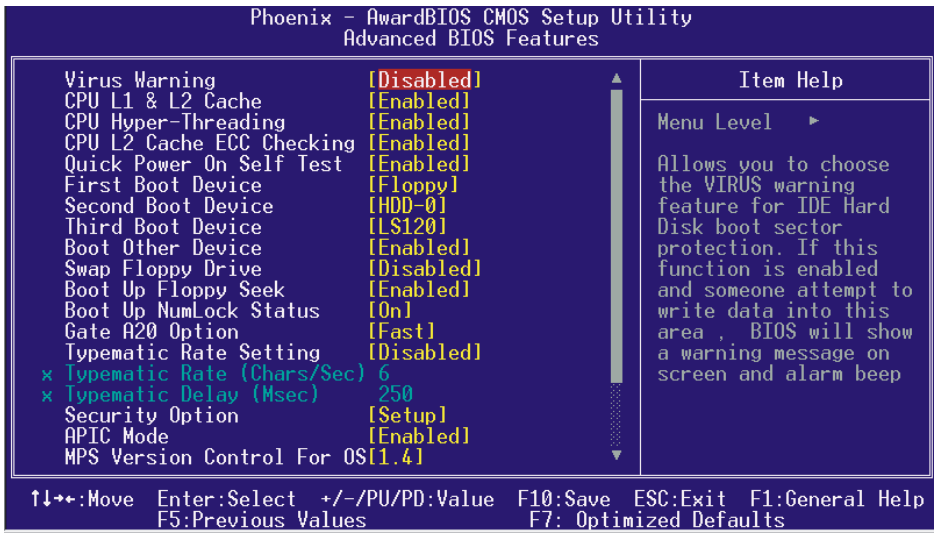
This table shows the selections that you can make on the Main Menu.

Item	Options	Description
Date	mm : dd : yy	Set the system date. Note that the 'Day' automatically changes when you set the date.
Time	hh : mm : ss	Set the system internal clock.
IDE Primary Master	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options
IDE Primary Slave	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
IDE Secondary Master	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
IDE Secondary Slave	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
Drive A Drive B	360K, 5.25 in 1.2M, 5.25 in 720K, 3.5 in 1.44M, 3.5 in 2.88M, 3.5 in None	Select the type of floppy disk drive installed in your system.
Video	EGA/VGA CGA 40 CGA 80 MONO	Select the default video device.

Item	Options	Description
Halt On	All Errors No Errors All, but Keyboard All, but Diskette All, but Disk/ Key	Select the situation in which you want the BIOS to stop the POST process and notify you.
Base Memory	N/A	Displays the amount of conventional memory detected during boot up.
Extended Memory	N/A	Displays the amount of extended memory detected during boot up.
Total Memory	N/A	Displays the total memory available in the system.

3 Advanced BIOS Features

■ **Figure 3. Advanced BIOS Setup**


Phoenix - AwardBIOS CMOS Setup Utility
Advanced BIOS Features
Virus Warning [Disabled]
CPU L1 & L2 Cache [Enabled]
CPU Hyper-Threading [Enabled]
CPU L2 Cache ECC Checking [Enabled]
Quick Power On Self Test [Enabled]
First Boot Device [Floppy]
Second Boot Device [HDD-0]
Third Boot Device [LS120]
Boot Other Device [Enabled]
Swap Floppy Drive [Disabled]
Boot Up Floppy Seek [Enabled]
Boot Up NumLock Status [On]
Gate A20 Option [Fast]
Typematic Rate Setting [Disabled]
x Typematic Rate (Chars/Sec) 6
x Typematic Delay (Msec) 250
Security Option [Setup]
APIC Mode [Enabled]
MPS Version Control For OS [1.4]
Item Help
Menu Level ▸
Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area , BIOS will show a warning message on screen and alarm beep
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7: Optimized Defaults

Virus Warning

This option allows you to choose the Virus Warning feature that is used to protect the IDE Hard Disk boot sector. If this function is enabled and an attempt is made to write to the boot sector, BIOS will display a warning message on the screen and sound an alarm beep.

Disabled (default)	Virus protection is disabled.
Enabled	Virus protection is activated.

CPU L1 & L2 Cache

The option allows you to enable/ disable CPU Cache to speed up the system performance.

Enabled (default)	Enable cache.
Disabled	Disable cache.

CPU Hyper-Threading

This option allows you to enable or disabled CPU Hyper-Threading.

The Choices: Enabled (Default), Disabled.

CPU L2 Cache ECC Checking

This item allows you to enable/disable CPU L2 Cache ECC Checking.

The Choices: Enabled (default), Disabled.

Quick Power On Self Test

Enabling this option will cause an abridged version of the Power On Self-Test (POST) to execute after you power up the computer.

Enabled (default)	Enable quick POST.
Disabled	Normal POST.

First /Second/Third/ Boot Other Device

These BIOS attempts to load the operating system from the devices in the sequence selected in these items.

The Choices: Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP100, LAN, HPT370, Enabled, Disabled.

Swap Floppy Drive

For systems with two floppy drives, this option allows you to swap logical drive assignments.

The Choices: Enabled, **Disabled** (default).

Boot Up Floppy Seek

Enabling this option will test the floppy drives to determine if they have 40 or 80 tracks. Disabling this option reduces the time it takes to boot-up.

The Choices: Enabled (default), Disabled.

Boot Up NumLock Status

Selects the NumLock. State after power on.

On (default)	Numpad is number keys.
Off	Numpad is arrow keys.

Gate A20 Option

Select if chipset or keyboard controller should control Gate A20.

Normal	A pin in the keyboard controller controls Gate A20.
Fast (default)	Lets chipset control Gate A20.

Typematic Rate Setting

When a key is held down, the keystroke will repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be configured.

Disabled (default)
Enabled

Typematic Rate (Chars/Sec)

Sets the rate at which a keystroke is repeated when you hold the key down.

The Choices: 6 (default)**,** 8,10,12,15,20,24,30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke.

The Choices: 250 (default)**,** 500,750,1000.

Security Option

This option will enable only individuals with passwords to bring the system online and/or to use the CMOS Setup Utility.

System	A password is required for the system to boot and is also required to access the Setup Utility.
Setup (default)	A password is required to access the Setup Utility only.

This will only apply if passwords are set from the Setup main menu.

APIC Mode

This option allows you to enable or disable the APIC (Advanced Programmable Interrupt Control).

The Choices: Enabled (default), Disabled.

MPS Version Control For OS

The BIOS supports version 1.1 and 1.4 of the Intel Multi-Processor Specification.
Select version supported by the operation system running on this computer.

The Choices: 1.4 (default), 1.1.

OS Select For DRAM > 64MB

A choice other than Non-OS2 is only used for OS2 systems with memory exceeding 64MB.

The Choices: Non-OS2 (default), OS2.

HDD S.M.A.R.T. Capability

This item allows you to enable/disable the S.M.A.R.T. function of the hard disk.

The Choices: Disabled (default), Enabled.

Report No FDD For WIN 95

Whether report no FDD for WIN 95 or not.

The Choices: No (default), Yes.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM for faster execution.

Enabled (default)	Optional ROM is enabled.
Disabled	Optional ROM is disabled.

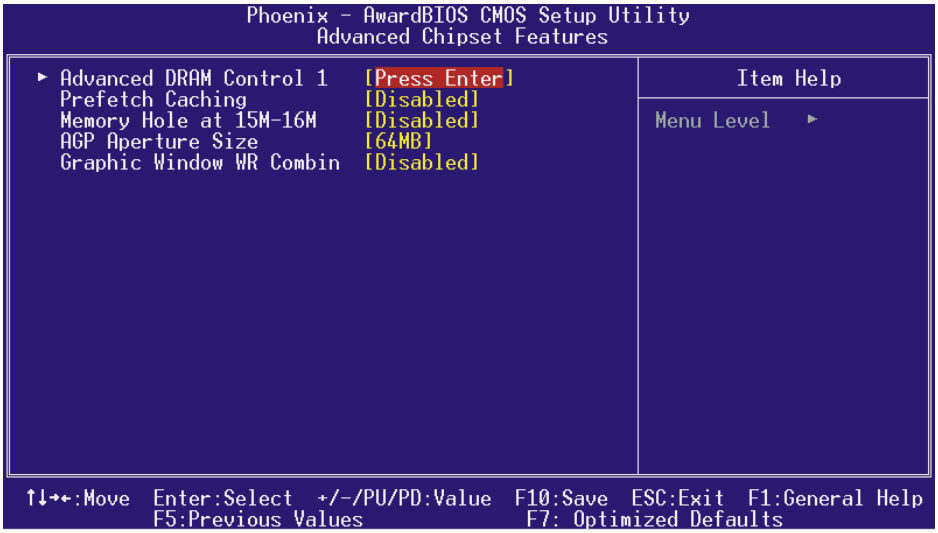
Summary Screen Show

This item allows you to enable/ disable display the Summary Screen Show.
The Choices: Disabled (default), Enabled.

4 Advanced Chipset Features

This submenu allows you to configure the specific features of the chipset installed on your system. This chipset manage bus speeds and access to system memory resources, such as DRAM. It also coordinates communications with the PCI bus. The default settings that came with your system have been optimized and therefore should not be changed unless you are suspicious that the settings have been changed incorrectly.

■ **Figure 4. Advanced Chipset Setup**


Phoenix - AwardBIOS CMOS Setup Utility
Advanced Chipset Features
Advanced DRAM Control 1 [Press Enter]
Prefetch Caching [Disabled]
Memory Hole at 15M-16M [Disabled]
AGP Aperture Size [64MB]
Graphic Window WR Combin [Disabled]
Item Help
Menu Level ▸
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7: Optimized Defaults

Advanced DRAM Control 1

To control the DDR SDRAM. If you highlight the literal "Press Enter" next to the "Advanced DRAM Control" label and then press the enter key, it will take you a submenu with the following options:

DRAM Timing Control
This item determines DRAM clock/ timing follow SPD or not.
The Choices: By SPD(default), Manual.

RAS Precharge Time (tRP)
This items allows you to specify the delay from precharge command to activate command.
The Choices: 2T, **3T** (default).

RAS Active Time (tRAS)
This items allows you to specify the minimum bank active time.
The Choices: 6T (default), 5T.

RAS to CAS Delay (tRCD)
Use this item to specify the delay from the activation of a bank to the time that a read or write command is accepted.
The Choices: 2T, **3T** (default).

CAS Latency Setting
When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.
The Choices: By SPD (default), 2T, 2.5T, 3T.

DRAM Addr/ Cmd Rate
The Choices: Auto (default), 1T, 2T.

Prefetch Caching

This item allows you enable/disable Prefetch Caching.
The Choices: Enabled, **Disabled** (default).

Memory Hole at 15M-16M

When enabled, you can reserve an area of system memory for ISA adapter ROM. When this area is reserved , it cannot be cached. Refer to the user documentation of the peripheral you are installing for more information.
The Choices: Disabled (default), Enabled.

AGP Aperture Size

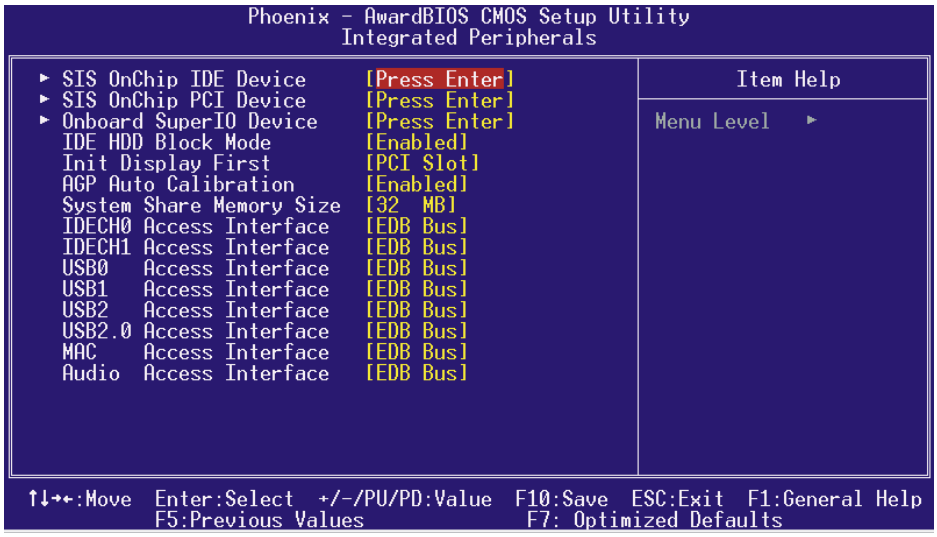
Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.
The Choices: 4M, 8M,16M, 32M, **64M** (default), 128M, 256M.

Graphic Window WR Combin

This item allows you enable/disable Graphic Window write-combine.
The Choices: Enabled, **Disabled** (default).

5 Integrated Peripherals

■ **Figure 5. Integrated Peripherals**


Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals
► SIS OnChip IDE Device [Press Enter]
► SIS OnChip PCI Device [Press Enter]
► Onboard SuperIO Device [Press Enter]
IDE HDD Block Mode [Enabled]
Init Display First [PCI Slot]
AGP Auto Calibration [Enabled]
System Share Memory Size [32 MB]
IDECH0 Access Interface [EDB Bus]
IDECH1 Access Interface [EDB Bus]
USB0 Access Interface [EDB Bus]
USB1 Access Interface [EDB Bus]
USB2 Access Interface [EDB Bus]
USB2.0 Access Interface [EDB Bus]
MAC Access Interface [EDB Bus]
Audio Access Interface [EDB Bus]
Item Help
Menu Level ►
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7: Optimized Defaults

SIS OnChip IDE Device

If you highlight the literal "Press Enter" next to the "SIS OnChip IDE Device" label and then press the enter key, it will take you a submenu with the following options:

Internal PCI/IDE
This item allows you select Internal PCI/IDE.
The Choices: Both (default), Disabled, Primary, Secondary.

IDE Primary / Secondary Master / Slave PIO
The IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.
The Choices: Auto (default), Mode0, Mode1, Mode2, Mode3, Mode4.

Primary / Secondary Master / Slave UltraUDMA
Ultra DMA/133 functionality can be implemented if it is supported by the IDE hard drives in your system. As well, your operating environment requires a DMA driver (Windows 95 OSR2 or a third party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/133, select Auto to enable BIOS support.
The Choices: Auto (default), Disabled.

IDE Burst Mode
This item allows you enable/disable IDE Burst Mode.
The Choices: Enabled (default), Disabled.

SIS OnChip PCI Device

If you highlight the literal "Press Enter" next to the "SIS OnChip PCI Device" label and then press the enter key, it will take you a submenu with the following options:

SIS USB Controller
This option allows you to control SIS USB Controlller.
The Choices: Enabled (default), Disabled.

USB Ports Number
This option allows you to control USB Ports Number.
The Choices: 6 Ports (default), 5 Ports, 4 Ports, 3 Ports.

USB 2.0 Supports
This option allows you to enabled or disabled USB2.0 Supports.
The Choices: Disabled, **Enabled** (default).

USB Keyboard Support
Enables support for USB attached keyboards.
The Choices: Disabled (default), Enabled.

SIS AC97 Audio
This option allows you to control the onboard AC97 Audio.
The Choices: Auto (default), Disabled.

SIS S/W Modem
This option allows you to control the onboard S/W Modem.
The Choices: Auto (default), Disabled.

SIS 10/100M ETHERNET
This option allows you to control the 10/100M Ethernet.
The Choices: Auto (default), Disabled.

SIS MAC Address Input

Sis 1394 Controller
This item allows you to enabled or disabled the 1394 controller.
The Choices: Enabled (Default), Disabled.

Onboard SuperIO Device

If you highlight the literal "Press Enter" next to the "Onboard Super IO Device" label and then press the enter key, it will take you a submenu with the following options:

Onboard FDC Controller
Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If install and FDC or the system has no floppy drive, select Disabled in this field.
The Choices: Enabled (default), Disabled.

Onboard Serial Port 1
Select an address and corresponding interrupt for the first and second serial ports.
The Choices: Disabled, **3F8/IRQ4** (default), 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto.

Onboard Serial Port 2
Select an address and corresponding interrupt for the first and second serial ports.
The Choices: Disabled, **2F8/IRQ3** (default), 3F8/IRQ4, 3E8/IRQ4, 2E8/IRQ3, Auto.

UART Mode Select
This item allows you to determine which Infra Red (IR) function of onboard I/O chip.
The Choices: Normal (default), AS KIR, IrDA.

UR2 Duplex Mode
Select the value required by the IR device connected to the IR port. Full-duplex mode permits simultaneous two-direction transmission. Half-duplex mode permits transmission in one direction only at a time.
The Choices: Half (default), Full.

Onboard Parallel Port
This item allows you to determine access onboard parallel port controller with which I/O Address.
The Choices: 378/IRQ7 (default), 278/IRQ5, 3BC/IRQ7, Disabled.

Parallel Port Mode
The default value is SPP.

SPP(default)	Using Parallel port as Standard Printer Port.
EPP	Using Parallel Port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port.
ECP+EPP	Using Parallel port as ECP & EPP mode.

ECP Mode Use DMA
Select a DMA Channel for the port.
The Choices: 3 (default), 1.

Game Port Address
Game Port I/O Address.
The Choices: 201 (default), 209, Disabled.

Midi Port Address
Midi Port Base I/O Address.
The Choices: 330 (default),300, 290**,** Disabled.

Midi Port IRQ
This determines the IRQ in which the Midi Port can use.
The Choices: 5, **10** (default).

IDE HDD Block Mode

Block mode is otherwise known as block transfer, multiple commands, or multiple sector read/write. Select the "Enabled" option if your IDE hard drive supports block mode (most new drives do). The system will automatically determine the optimal number of blocks to read and write per sector.
The Choices: Enabled (default), Disabled.

Init Display First

With systems that have multiple video cards, this option determines whether the primary display uses a PCI Slot or an AGP Slot.
The Choices: PCI Slot (default), AGP.

AGP Auto Calibration

This item allows you enable/disable AGP Auto Calibration.
The Choices: Enabled (default), Disabled.

System Share Memory Size

This item allows you to select the system share memory size.
The Choices: 32MB (default), 64MB, 16MB, 8MB, 4MB.

IDECH0/1 Access Interface

This item allows you to select the IDECH0/1 Access Interface.
The Choices: EDB Bus (default), PCI Bus.

USB0 Access Interface

This item allows you select the USB0 Access Interface.
The Choices: EDB Bus (default), PCI Bus.

USB1 Access Interface

This item allows you select the USB1 Access Interface.
The Choices: EDB Bus (default), PCI Bus.

USB2 Access Interface

This item allows you select the USB2 Access Interface.
The Choices: EDB Bus (default), PCI Bus.

USB2.0 Access Interface

This item allows you select the USB2.0 Access Interface.
The Choices: EDB Bus (default), PCI Bus.

MAC Access Interface

This item allows you select the MAC Access Interface.
The Choices: Embedded Bus (default), PCI Bus.

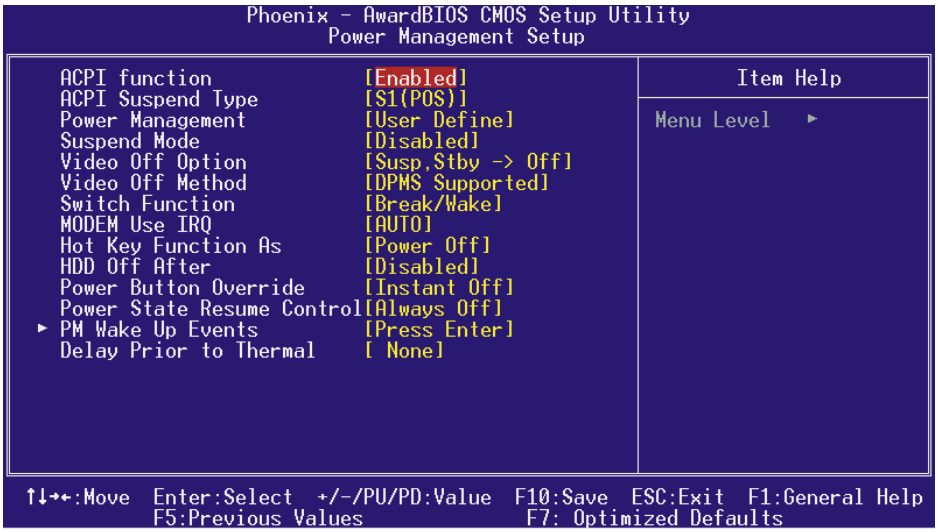
Audio Access Interface

This item allows you select the Audio Access Interface
The Choices: Embedded Bus (default), PCI Bus.

6 Power Management Setup

The Power Management Setup Menu allows you to configure your system to utilize energy conservation and power up/ power down features.

■ **Figure 6. Power Management Setup**


Phoenix - AwardBIOS CMOS Setup Utility
Power Management Setup
ACPI function [Enabled]
ACPI Suspend Type [S1(POS)]
Power Management [User Define]
Suspend Mode [Disabled]
Video Off Option [Susp,Stby -> Off]
Video Off Method [DPMS Supported]
Switch Function [Break/Wake]
MODEM Use IRQ [AUTO]
Hot Key Function As [Power Off]
HDD Off After [Disabled]
Power Button Override [Instant Off]
Power State Resume Control [Always Off]
PM Wake Up Events [Press Enter]
Delay Prior to Thermal [None]
Item Help
Menu Level ►
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7: Optimized Defaults

ACPI function

This item displays the status of the Advanced Configuration and Power Management (ACPI).

The Choices: Enabled (default), Disabled.

ACPI Suspend Type

The item allows you to select the suspend type under the ACPI operating system.

The Choices: S1 (POS) (default)	Power on Suspend
S3 (STR)	Suspend to RAM
S1 & S3	POS+STR

Power Management

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

1.HDD Power Down.

2.Suspend Mode.

There are four options of Power Management, three of which have fixed mode settings

Min. Power Saving

Minimum power management.
Suspend Mode = 1 hr.

Max. Power Saving

Maximum power management only available for sl CPU's.
Suspend Mode = 1 min.

User Defined (default)

Allows you to set each mode individually.
When not disabled, each of the ranges are from 1 min. to 1 hr.

Suspend Mode

The item allows you to select the suspend type under ACPI operating system.

The Choices: Disabled (default), 1 Min, 2 Min, 4 Min, 6 Min, 8 Min, 20 Min, 30 Min, 40 Min, 1 Hour.

Video Off Option

This field determines when to activate the video off feature for monitor power management.

The Choices: Suspend→Off, Always on, **Susp, Stby→Off** (Default), All modes→Off.

Video Off Method

This option determines the manner in which the monitor is goes blank.

V/H SYNC+Blank
This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

Blank Screen
This option only writes blanks to the video buffer.

DPMS Supported (default)
Initial display power management signaling.

Switch Function

You can choose whether or not to permit your system or enter complete suspend mode. Suspend mode offers greater power savings, with a correspondingly longer with a correspondingly longer awakening period.

The Choices: Break/ Wake (default), Disabled.

Modem Use IRQ

This determines the IRQ, which can be applied in MODEM use.
The Choices: Auto (default), 3, 4, 5, 7, 9, 10, 11, NA.

Hot Key Function As

This item allows you select Hot Key Function As Power Off (Ctrl-Alt-Backspace).
The Choices: Power Off (default), Disabled, Suspend.

HDD Off After

After a selected period of drive inactivity, the hard disk drive will power down while all other devices remain active.
The Choices: Disabled (default), 1 Min, 2 Min, 3 Min, 4 Min, 5 Min, 6 Min, 7 Min, 8 Min, 9 Min, 10 Min, 11 Min, 12 Min, 13 Min, 14 Min, 15 Min.

Power Button Override

When you select Delay 4 sec, pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state.
The Choices: Instant Off (default), Delay 4 Sec.

Power State Resume Control

This item allows you to select Power State Resume Control.
The Choices: Always off (default), Always on, Keep Pre-State.

PM Wake Up Events

If you highlight the literal "Press Enter" next to the "PM Wake Up Events" label and then press the enter key, it will take you a submenu with the following options:

IRQ [3-7, 9-15], NMI
This item allows you enable/disable IRQ [3-7,9-15] NMI.
The Choices: Enabled (default), Disabled.

IRQ 8 Break Suspend
This item allows you enable/disable IRQ8 Break Suspend.
The Choices: Disabled (default), Enabled.

RING/WOL Power Up Control
This item allows you to control the RING Power Up.
The Choices: Enabled, **Disabled** (default).

MACPME Power Up Control
This item allows you to control the MACPME Power Up.
The Choices: Enabled, **Disabled** (default).

PCIPME Power Up Control
This item allows you to control the PCIPME Power Up.
The Choices: Enabled, **Disabled** (default).

Power Up by Alarm
When you select Enabled, fields appear that let you set the alarm that returns the system to Full On state.
The Choices: Disabled (default), Enabled.

Month Alarm
Select a month (1-12) or NA if you want the alarm active during all months
Day of Month Alarm
Select a date in the month. Select 0 if you prefer to set a weekly alarm.
Time (hh:mm:ss) Alarm
Set the time you want the alarm to go off on the days when it is activated.

Reload Global Timer Events
Reload Global Timer Events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything, which occurs to a device, which is configured as Enabled, even when the system is in a power down mode.

Primary IDE	**Disabled** (default), Enabled.
Secondary IDE	**Disabled** (default), Enabled.
FDD, COM, LPT Port	**Disabled** (default), Enabled.
PCI, PIRQ[A-D]#	**Disabled** (default), Enabled.

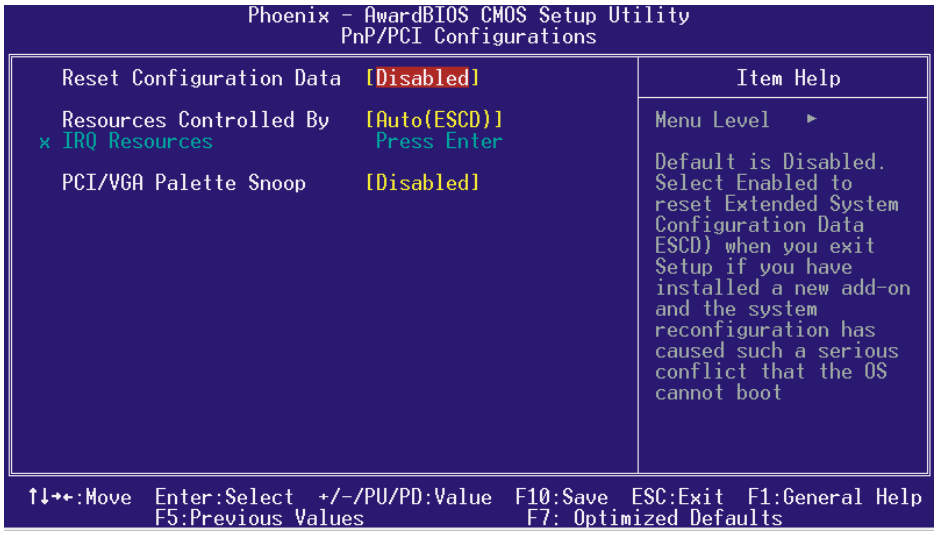
Delay Prior to Thermal

The Choices: None (default), 1Min, 2Min, 4Min, 8Min, 16Min, 32Min, 64Min.

7 PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

■ **Figure 7. PnP/PCI Configurations**


Phoenix - AwardBIOS CMOS Setup Utility
PnP/PCI Configurations
Reset Configuration Data [Disabled]
Resources Controlled By [Auto(ESCD)]
x IRQ Resources Press Enter
PCI/VGA Palette Snoop [Disabled]
Item Help
Menu Level ►
Default is Disabled. Select Enabled to reset Extended System Configuration Data ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7: Optimized Defaults

Reset Configuration Data

The system BIOS supports the PnP feature which requires the system to record which resources are assigned and protects resources from conflict. Every peripheral device has a node, which is called ESCD. This node records which resources are assigned to it. The system needs to record and update ESCD to the memory locations. These locations (4K) are reserved in the system BIOS. If the Disabled (default) option is chosen, the system's ESCD will update only when the new configuration varies from the last one. If the Enabled option is chosen, the system is forced to update ESCDs and then is automatically set to the "Disabled" mode.

The above settings will be shown on the screen only if "Manual" is chosen for the resources controlled by function.

Legacy is the term, which signifies that a resource is assigned to the ISA Bus and provides non-PnP ISA add-on cards. PCI / ISA PnP signifies that a resource is assigned to the PCI Bus or provides for ISA PnP add-on cards and peripherals.

The Choices: Disabled (default), Enabled.

Resources Controlled By

By Choosing "**Auto(ESCD)**" (default), the system BIOS will detect the system resources and automatically assign the relative IRQ and DMA channel for each peripheral.By Choosing "Manual", the user will need to assign IRQ & DMA for add-on cards. Be sure that there are no IRQ/DMA and I/O port conflicts.

IRQ Resources

This submenu will allow you to assign each system interrupt a type, depending on the type of device using the interrupt. When you press the "Press Enter" tag, you will be directed to a submenu that will allow you to configure the system interrupts. This is only configurable when "Resources Controlled By" is set to "Manual".

IRQ-3	assigned to	PCI Device
IRQ-4	assigned to	PCI Device
IRQ-5	assigned to	PCI Device
IRQ-7	assigned to	PCI Device
IRQ-9	assigned to	PCI Device
IRQ-10	assigned to	PCI Device
IRQ-11	assigned to	PCI Device
IRQ-12	assigned to	PCI Device
IRQ-14	assigned to	PCI Device
IRQ-15	assigned to	PCI Device

PCI / VGA Palette Snoop

Choose Disabled or Enabled. Some graphic controllers which are not VGA compatible take the output from a VGA controller and map it to their display as a way to provide boot information and VGA compatibility.

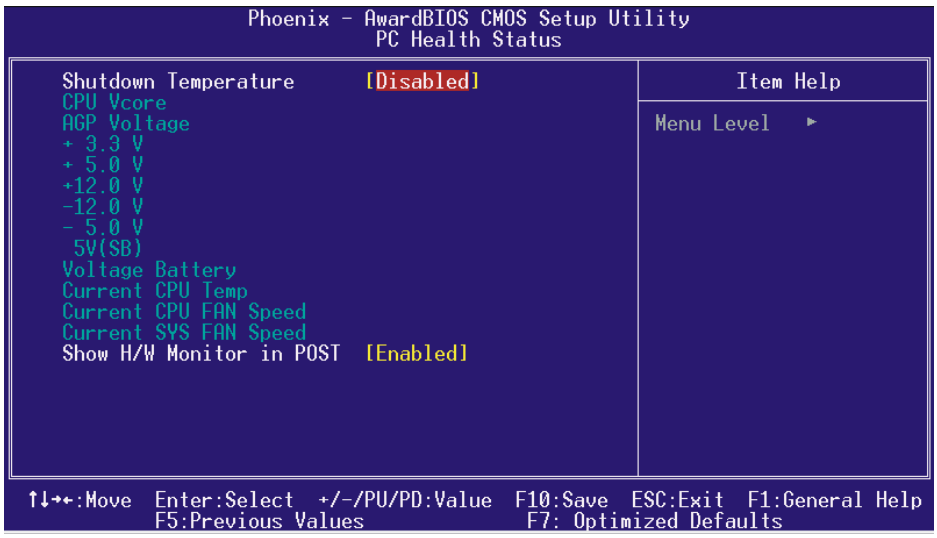
However, the color information coming from the VGA controller is drawn from the palette table inside the VGA controller to generate the proper colors, and the graphic controller needs to know what is in the palette of the VGA controller. To do this, the non-VGA graphic controller watches for the Write access to the VGA palette and registers the snoop data. In PCI based systems, where the VGA controller is on the PCI bus and a non-VGA graphic controller is on an ISA bus, the Write Access to the palette will not show up on the ISA bus if the PCI VGA controller responds to the Write.

In this case, the PCI VGA controller should not respond to the Write, it should only snoop the data and permit the access to be forwarded to the ISA bus. The non-VGA ISA graphic controller can then snoop the data on the ISA bus. Unless you have the above situation, you should disable this option.

Disabled (default)	Disables the function.
Enabled	Enables the function.

8 PC Health Status

■ **Figure 8. PC Health Status**



Shutdown Temperature

This item allows you to set up the CPU shutdown Temperature. This item only effective under Windows 98 ACPI mode.

The Choices: Disabled (default), $60^{O}C/140^{O}F$, $65^{O}C/149^{O}F$, $70^{O}C/158^{O}F$, $75^{O}C/167^{O}F$.

CPU Vcore/AGP Voltage/+3.3V/+5V/+12V/-12V/-5V/ 5V(SB) Voltage Battery

Detect the system's voltage status automatically.

Current CPU Temp

This field displays the current temperature of CPU.

Current CPUFAN Speed

This field displays the current speed of CPU fan.

Current SYS FAN Speed

This field displays the current speed SYSTEM fan.

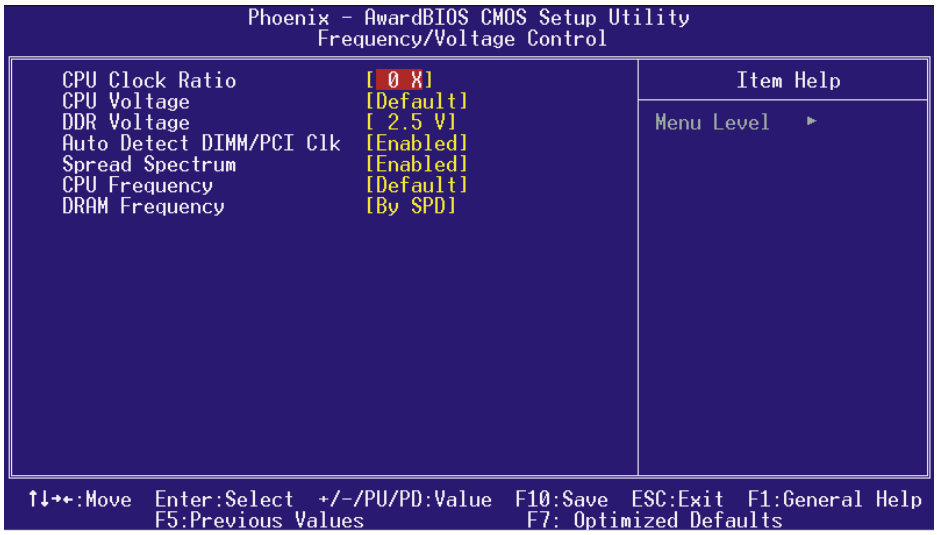
Show H/W Monitor in POST

If your computer contains a monitoring system, it will show PC health status during POST stage.

The Choices: Enabled (default), Disabled.

9 Frequency/ Voltage Control

■ **Figure 9. Frequency/ Voltage Control**


Phoenix - AwardBIOS CMOS Setup Utility
Frequency/Voltage Control
CPU Clock Ratio [0 X]
CPU Voltage [Default]
DDR Voltage [2.5 V]
Auto Detect DIMM/PCI Clk [Enabled]
Spread Spectrum [Enabled]
CPU Frequency [Default]
DRAM Frequency [By SPD]
Item Help
Menu Level ▸
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7: Optimized Defaults

CPU Clock Ratio

This item allows you to select the CPU Ratio.

The Choices: 0X (default).

CPU Voltage

This item allows you to select the CPU Voltage.

The Choices: Default (Default), +5.1%, +3.4%, +1.7%

DDR Voltage

This item allows you to select the DDR Voltage

The Choices: 2.5V (Default), 2.6V, 2.7V, 2.8V.

Auto Detect DIMM/ PCI Clk

This item allows you to enable / disable auto Detect PCI Clock.

The Choices: Enabled (default), Disabled.

Spread Spectrum

This item allows you to enable/ disable the Spread Spectrum function.
The Choices: Enabled (default), Disabled.

CPU Frequency

This item allows you to control CPU Frequency.
The Choices: Default (default), 100MHz, 133MHz.

DRAM Frequency

This item allows you to control DRAM Frequency.
The Choices: By SPD (default), 200MHz, 266MHz, 333MHz.

If unfortunately, the system's frequency that you are selected is not functioning, there are two methods of booting-up the system.
Method 1: Clear the CMOS data by setting the JCMOS1 ((2-3) closed)) as "ON" status. All the CMOS data will be loaded as defaults setting.
Method 2: Press the <Insert> key and Power button simultaneously, after that keep-on pressing the <Insert> key until the power-on screen showed. This action will boot-up the system according to FSB of the processor.